

REMARKS

By this amendment, claims 2 and 15-21 have been cancelled, claims 1, 5-7, 11 and 13 have been amended, and claims 22-28 have been added. Thus, claims 1, 3-14 and 22-28 are now active in the application. Reexamination and reconsideration of the application is respectfully requested.

The specification and Abstract have been carefully reviewed and revised to correct grammatical and idiomatic errors in order to aid the Examiner in further consideration of the application. The amendments to the specification and Abstract are incorporated in the attached substitute specification and abstract. No new matter has been added.

Attached hereto is a marked-up version of the changes made to the specification and Abstract by the current amendment. The attachment is captioned "Version with markings to show changes made."

In item 1 on page 2 of the Office Action, the disclosure was objected to because the paragraphs [0071] - [0077] use different reference numerals than the figures which they discuss. This informality has been addressed by revisions to the specification incorporated in the above-mentioned substitute specification. In particular, the reference numerals 3, 4 and 5 set forth in the offending portion of the specification have been changed to 43, 44 and 45, respectively.

Next, in items 2-9 on pages 2-6 of the Office Action, claims 1-4, 6, 15, 16, 18 and 19 were rejected under 35 U.S.C. 102(b) as being anticipated by Liviken et al. (WO 94/09684); claims 5 and 17 were rejected under 35 U.S.C. 103(a) as being unpatentable over Liviken et al. in view of Gessler et al. (U.S. 2004/0074589); claims 20 and 21 were rejected under 35 U.S.C. 103(a) as being unpatentable over Liviken et al. in view of Kayama (JP 03-015412); claims 7-10 were rejected under 35 U.S.C. 103(a) as being unpatentable over Liviken et al. in view of Rowland (U.S. 2,732,479); claims 11, 13 and 14 were rejected under 35 U.S.C. 103(a) as being unpatentable over Liviken et al. in view of Rowland and Peeri (U.S. 4,063,069); and claim 12 was rejected under 35 U.S.C. 103(a) as being unpatentable over Liviken et al. in view of

Rowland and Moss (U.S. 6,311,637). It is respectfully submitted that these rejections are clearly inapplicable to the claims as now presented, for the following reasons.

With exemplary reference to the present drawing figures, claim 1 now sets forth a heated seat assembly comprising: a seat surface material 14; a heating element 1 fixed inside the seat surface material 14, the heating element 1 comprising a base material 3 made of a hotmelt material, and a linear heater 2 disposed on the base material 3 and being sewn to the base material 3 with no adhesive being interposed between the base material 3 and the linear heater 2 to secure the linear heater 2 to the base material 3 (as shown in Fig. 3); and a resin 15(8) filled inside of the seat surface material 14 and covering the heating element 1; wherein the linear heater 2 is fixed to an inside of the seat surface material 14 by the base material 3.

Similarly, independent method claim 22 sets forth a method of manufacturing a heated seat assembly, comprising: providing a seat surface material 14; preparing a heating element 1 by disposing a linear heater 2 on a base material 3 and sewing the linear heater 2 to the base material 3 with no adhesive being interposed between the base material 3 and the linear heater 2 to secure the linear heater 2 to the base material 3, the base material 3 being a hotmelt base material 3; filling resin 15(8) inside of the seat surface material 14 so as to cover the heating element 1; and fixing the heating element 1 inside the seat surface material 14 by fixing the linear heater 2 to an inside of the seat surface material 14 by hot-melting of the hotmelt base material 3.

With this arrangement of the present heated seat assembly of claim 1 and with the method recited in claim 22, the linear heater 2 of the present invention can be secured to the base material 3 by sewing (e.g. with the threads 4, 5 shown in Fig. 3), and then the heating element 1 can be secured to the inside of the seat surface material 14 by hot-melting of the hotmelt base material 3. The sewing of the linear heater to the base material provides for securing of the linear heater to prevent its displacement during filling of the resin raw material 8 to thus allow formation of the main pad 15. At the time of filling of the resin 8 to form the main pad 15, the hotmelt base material 3 can be melted so as to secure the heating element 1 to the seat surface material 14.

As indicated by the Examiner, the Liviken publication discloses a vehicle seat heating element and a manufacturing method therefor which includes a seat surface material 7, a resin 9 and a heating element including a linear heater 2 and a base material 3 or 4. However, in the Liviken arrangement, the linear heater 2 is either secured to the base material by an adhesive, or is bonded to the base material 3 by the base material being hot-melted when a heated linear heater is placed thereon. The Liviken publication does not disclose or suggest the linear heater being sewn on the base material, as required by claims 1 and 22.

The Examiner cited the Gessler et al. patent for disclosing the general concept of "securing a fiber to a substrate by sewing with hotmelt material." However, there is no suggestion whatsoever that would have motivated a person of ordinary skill in the art to utilize the Gessler et al. hotmelt thread material to sew the linear heater 2 to the base material 3 of Liviken et al. That is, the hotmelt threads of Gessler et al. are utilized for integrating a reinforcing fiber 1 with a substrate 2 by having the meltable fixing thread secure the reinforcing fiber structures and then be melted so as to disintegrate completely in the stacked structure (see column 1, paragraph [0011]). The use of this meltable fixing thread to fully integrate the reinforcing fiber structure with a multilayer stack structure would not have provided a suggestion to the ordinary artisan to sew a linear heater to a base material, such as required by claims 1 and 22. Furthermore, it is noted that, in the Liviken patent, the linear heater 2 is already secured to the base material 3 either by a bonding agent (e.g. glue) or by heating of the linear heater so as to melt the hotmelt base material when the linear heater is placed thereon. There is no suggestion in the Liviken publication or the Gessler et al. publication that either of these bonding methods of the Liviken patent are insufficient or that the use of the hotmelt threads of the Gessler et al. would provide either an advantage or that they will be sufficient for the purpose of the Liviken patent.

The Examiner also cited the Kayama patent for disclosing "the foam being urethane resin and being formed by foaming injection molding"; and cited the Rowland patent for disclosing "a heater having a braided structure with a plurality of conductors and threads"; and cited the Peeri

patent for disclosing a heating element having a lubricant coating layer; and cited the Moss patent for disclosing the coloring of an insulating coating layer. However, these additional references provide no teaching or suggestion which would have obviated the above discussed shortcomings of the Liviken and Gessler et al. references.

Accordingly, for the above reasons, it is believed clear that the invention as recited in each of claims 1 and 22 is not anticipated by the Liviken et al. reference. Furthermore, for the reasons discussed above, it is submitted that a person of ordinary skill in the art would clearly have not been motivated to modify the Liviken et al. arrangement or to make any combination of the references of record in such a manner as to result in or otherwise render obvious the heated seat assembly as recited in claim 1 or the manufacturing method as recited in claim 22. Therefore, it is respectfully submitted that claims 1 and 22, as well as the claims depending therefrom, are clearly allowable over the prior art of record.

In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is clearly in condition for allowance. An early notice thereof is earnestly solicited.

If, after reviewing this Amendment, the Examiner feels there are any issues remaining which must be resolved before the application can be passed to issue, it is respectfully requested that the Examiner contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

Mitsuru YONEYAMA et al.

By:


Charles R. Watts
Registration No. 33,142
Attorney for Applicants

CRW/asd
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
November 8, 2004